



Issues in health risk assessment of current and future heat extremes

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Abstract:

BACKGROUND: In assessing health risks relating to current and future heat extremes, it is important to include developing countries, because these countries are considered to be vulnerable to the impact of climate change due to inadequate public health infrastructure, nutritional status and so forth. However, it is usually difficult to obtain relevant information from these countries, also because of insufficient public health infrastructure. **OBJECTIVES:** We invented a method that can be used for developing countries to assess the health risks of current and future extremes, but there still are some issues. We introduce and discuss these issues. **DESIGN:** We analysed time-series data with non-parametric regression models including generalised additive models, which controlled for time trends. **RESULTS:** When we controlled for year, the temperature-mortality relation was V-shaped, but when we controlled for season as well as year, the left side of the V-shape disappeared. Our month-specific analysis also revealed that winter months had higher mortality rates than other months, but there was no relation between mortality rate and temperature within each month during winter. **CONCLUSIONS:** This suggests that, unlike heat effects, risks due to cold effects may not be ameliorated even if global warming occurs. We need to investigate the mechanism behind high mortality during winter months.

Source: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2799309>

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Temperature

Temperature: Extreme Cold, Extreme Heat

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Non-United States

Climate Change and Human Health Literature Portal

Non-United States: Asia

Asian Region/Country: Other Asian Country

Other Asian Country: Japan

Health Impact: 

specification of health effect or disease related to climate change exposure

Injury

Intervention: 

strategy to prepare for or reduce the impact of climate change on health

A focus of content

Mitigation/Adaptation: 

mitigation or adaptation strategy is a focus of resource

Adaptation

Population of Concern: A focus of content

Population of Concern: 

populations at particular risk or vulnerability to climate change impacts

Low Socioeconomic Status

Resource Type: 

format or standard characteristic of resource

Research Article

Timescale: 

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment: 

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content